



## SEQUENCE LISTING

<110> Sellers, Edward  
Tyndale, Rachel

<120> Use of Inhibitors of CYP2A6 for Regulating Nicotine Metabolism

<130> 62805.000002

<140> 09/214,851

<141> 1999-09-09

<150> PCT/CA97/00506

<151> 1997-07-17

<160> 11

<170> PatentIn version 3.1

<210> 1

<211> 7215

<212> DNA

<213> Homo sapiens

<400> 1

AK  
aagttcccct gaaatatggc tctggtcttc ctccccttgc caatgaagaa gatggcagtg 60  
gagggttctat ggcagccatc ctggcctcac tctgaggttc caatgaggat tctgggcatc 120  
aagagacagc tctgggcaaa gctaaatcaa gtcagcccct ggaccagtg ctgggctgct 180  
gggctttctg ggagaacgcc gctgggcttg ctacacactc ctctcccag aaactccaca 240  
cccacagccc tgggtcttcc tagccccgag actttcaagt ccatatgcct ggaatcccc 300  
ttctgagac ccttaaccct gcatactcca caacagaaga ccctaaatg cacagccaca 360  
ctttgtctta ccctaataaa acccagacct ttggattcct ctcccctgga acccccagat 420  
ccgcacaact ttgggggtgca ttctcactct cagaccccaa atccaaagcc caagtgtctc 480  
cctatgcaaa tattccaaac tctcagttc tacagcttat ctgttgcccc ctccataatc 540  
cacagccctg cggcaccct cctgaagtac cacagattta gtctggaggc ccctctctg 600  
ttcagctgcc ctgggggtccc cttatctctc cttgctggct gtgtcccaag ctaggcagga 660  
ttcatggtgg ggcattgtagt tgggaggtga aatgaggtaa ttatgtaatc agccaaagtc 720  
catccctctt ttccaggcag tataaaggca aaccacccca gccgtcacca tctatcatcc 780  
ctctaccacc atgctggcct cagggatgct tctggtggcc ttgctggcct gcctgactgt 840  
gatggtcttg atgtctgttt ggcagcagag gaagagcaag gggaagctgc ctccgggacc 900  
caccctattg cccttcattg gaaactacct gcagctgaac acagagcaga tgtacaactc 960  
cctcatgaag gtgtcccaag acagggagat ggggtgtctc ggggtgggggc tgcctagtgt 1020  
gctggggctt tgtggcaggg ggttgaccag tgtggaccag agtcttagga aatggagttt 1080

tggagtttca gcatcagaaa gacaggatct tgggatgtcc agctccctga ctgtgagaac 1140  
 ctgggtgcga agcatcccag cacatgacat ctcggtgctg ggccccattc agagtggagg 1200  
 gttctccctc taaccactcc caccacctc catcagatca gtgagcgcta tggccccgtg 1260  
 ttcaccattc acttggggcc ccggcgggtc gtggtgctgt gtggacatga tgccgtcagg 1320  
 gaggtcttgg tggaccaggc tgaggagttc agcgggcgag gcgagcaagc caccttcgac 1380  
 tgggtcttca aaggctatgg tgcccaagag ggggaagggtg ggcagggtgga cacgaaggtc 1440  
 tcagtgttcc cagccttctc cctgactctc ctgacaactg gaggataagg gagagtcccc 1500  
 agtctggtct tccctcccca tctccctaca ttggggcctc tccatgtgta tccctcacct 1560  
 gtctccagcg gccctgtcct gattcctccc tgccctctctc tgccccacct ccttattctc 1620  
 tctcactgga gtctctctct tccctctctc ctccatctct aaggacatcc tgggtttctg 1680  
 tttaccagcc ctgggtctct gtctacatga gtctttgagg ccctcttagc ttctgggctt 1740  
 ctctgggttt ctcatctctc cggatccctt tctcaattct tctctgtct taggatgcca 1800  
 gggttattcc tacttcaca tcttcaggt ccactctctg gtaacagtct ctcttccttc 1860  
 cagaccctct ctgtttctat ctcaatatta aactctctgc tccagctcag cttagaatc 1920  
 tcacaccaag agaggatgtc ctccaccag atctcccat atctcactac cccaccctcc 1980  
 atcctctgcc tccatcactc tctttctctc cccactgcc tgccgacgag atccaatgga 2040  
 gtgtggagct aatgccgtga agctatgtgc atctctctgt ctggccgtac ctgggtaata 2100  
 acctgatcga ctaggcgtgg tattcagcaa cggggagcgc gccaaagcagc tcctgcgctt 2160  
 tgccatcgcc accctgaggg acttcggggg gggcaagcga ggcacgagg agcgcatcca 2220  
 ggaggagtcg ggcttcctca tcgaggccat ccggagcacg cacggtgagc aggggacccc 2280  
 gagtgcgggg gcaggagaag gaaaacaccc aggacgagga acccgcgcg gttctgcctg 2340  
 gggatgggga ctaggtgggg aaaggcgccc gcacttcag ccctggagtc tggcgctggg 2400  
 aatttggtc aacaaggccc tgctcctgg aattctgact ctctcagac ctctgagttg 2460  
 actctctccc caacccctt ctcccgacat acccgaggc gccaatatcg atcccacctt 2520  
 ctctctgagc cgcacagtct ccaatgtcat cagctccatt gtctttgggg accgcttga 2580  
 ctataaggac aaagagttcc tgtcactgtt gcgcatgatg ctaggaatct tccagttcac 2640  
 gtcaacctcc acggggcagg taatgggtgc agcccgcccc gtgaaggccc ttacaaaaac 2700  
 cggcaaattg tccccctacc gggggaaggg ggccccaaat tcccaccgcc ccccgagacg 2760  
 tgtccctca aaatcagtc ccgatttggg caaattggca gagtggaacc agaccgggt 2820  
 tggttgtcca atccctgct ctccaggac accgggatag cacaacagat gctccccaaa 2880  
 acagagcctg ctggcaggat gcataccctc agctcagctc tctcaccctg ggcacgtgtt 2940

a14

cccatcccca acttaccggt aattttctaac agatgctccc taccaggtc ttcttgaata 3000  
 ttttaacacc cggaaaccct gggtaacctaa ccttccctgt aaactttaga gattagttcc 3060  
 tatccggccc ctctgaaata cctaaccacc ggagaccaga tgcctttaac tcagttcctt 3120  
 ccttgctatg aaacaaatcc cattcccatc agctcctgcc ccgtgacagc tgtccttccc 3180  
 ttcccatcct ctctctgcaa cccagctct atgagatggt ctcttcggtg atgaaacacc 3240  
 tgccaggacc gcagcaacag gcctttcagt tgctgcaagg gctggaggac ttcatagcca 3300  
 agaaggtgga gcacaaccag cgcacgctgg atcccaattc cccacgggac ttcattgact 3360  
 cctttctcat ccgcatgcag gaggtacacc ccagcagcca ctgcggggag atgcaaagcc 3420  
 aggcagaggg aaatcagtct gggagtgggg caggcagatg acacaggccc attcaaatta 3480  
 accctcatca taataatcct cacaattggc tgggtgccgt ggctaacagc ctgtaatccc 3540  
 agcactttgg gagggcggagg caggtggatc acctgaggtc aggagttcga gaccagcctg 3600  
 gccaacatgg tcaaaccctg tctctactaa aaatccaaaa attagttggg catggtggcg 3660  
 cgaagggggg cagaggttgc aatgagccaa gatcacggca ttgcactcca gtctgggtga 3720  
 cagaatgagg ccctgtgtca aaaaaaatta atcacttggt taaaaagtaa gtgagcctgc 3780  
 atggtcatgc gcatgtgcag ctccagctac tcaggaggct gaggctggag gattgcttga 3840  
 gctcaggagt tggcgtccgg cctgtgcaac ttagcaagac caagtcagta taagaaaaaa 3900  
 aaaaaacaaa aaaaaagctg acagctaagt tgataattga cggacagatg gtcagcaagg 3960  
 taacgaaggt gagaaggaag agcattgggg gcaacgccag gagtcagggc aagggtggt 4020  
 tcctagagcg agtctggtag gatctagggc ccctcttctc caccctgcgg tcttgcccca 4080  
 aagagaggtc gaggggtgctg ggattgcgct agactcgagt ctgtgtagat cttgggggtcc 4140  
 cctcttgacc ccattgggtc tgaacctaa agtggaagat ccatgggggtg aaccctaga 4200  
 tgggtgcctg aggtcaagca ggagtgaggt tgtcctaaag cccctctcc cttcaggagg 4260  
 agaagaacct caacacggag ttctacttga agaacctgat gatgagcacg ttgaacctct 4320  
 tcattgcagg caccgagacg gtcagcacca ccctgcacta tggcttctta ctgctcatga 4380  
 agcaccacaga ggtggagggg aaggctggag ggggacggaa gtggagggcc ccagaccctc 4440  
 aaaattcccc ttogactggt gcaatgtccc cacctgtccc agatcccggg accctgagac 4500  
 gtgacttgct gtccagagac agggcaacat tcagctggta ggcacagct gagtctcatt 4560  
 agatattaaa atattgaaaa tgtctgcact gattggtcag tcacttctgt cccaagccca 4620  
 ctgagtcccc actgcccgtt ccaccgggtc atcccctaag ttctccctg tgccctccct 4680  
 gtgattctgg cacaacctgg ttaacaggat cctactccaa caatgcgaat ggggtgatgtc 4740

Q14

tgtttctgtta tgaatgctct acttccgtct cataggcgga ggcatttcat ccacccatt 4800  
 ttgcctatcc ggactatcat ttcctgctct gagacccta gatacctaaa cacattcccc 4860  
 ctctccccc agccaaggct catgaggaga ttgacagagt gatcggcaag aaccggcagc 4920  
 ccaagtttga ggaccgggcc aagatgccct acatggaggc agtgatccac gagatccaaa 4980  
 gatttgagga cgtgatcccc atgagtttgg cccgcagagt caaaaaggac accaagtttc 5040  
 gggattttctt cctccctaag gtgctatccg cccccacccc ccagactacg gggactccag 5100  
 cccctctctg tgtccccagc atccccacca cattagaagc tttctagacc ctgtcccact 5160  
 cctcaatca gtcaaaaaag acttcccaa ccaccacatc cgttccacct ttccacttag 5220  
 aactcctga gtccctgcac tctccagact ctttgtgtca ggagaatcaa acacatgttc 5280  
 ccaaacttcc tatcttaaga aacagaagcc ccctttccat tcggcctttt gtcataaggga 5340  
 cagaaatctc aggtccccca aactcctgcc tagaaggaca tggaccccat gtctccaaa 5400  
 ctctctgttt cagagatgtg aaccttctat cccccaaggt cctccctcag aggtccccaa 5460  
 ttcccatgcc tgccacttcc cctcaccggg gcaccctagt tccccctcca gccctgtgt 5520  
 actctcaaca atcccccaac ccgcctcatc acatacacct tctcctccc tcccagggca 5580  
 tagaagtgtt ccctatgttg ggctccgtgc tgagagacct caggttcttc tccaaccccc 5640  
 gggacttcaa tccccagcac ttcctgggtg agaaggggca gtttaagaag cgtgatgctt 5700  
 ttgtgccctt ctccatcagt aagagaccac tgtttggtgc caggcttact actcacacca 5760  
 gcaggggcct cccttaccba gttccctct ctgccgtgta gcctagtatt tccccagctt 5820  
 ggcaagttcc tgtagcaat ctaccgtcga gccaccaggt gatactccct taactaccaa 5880  
 gcaccagta cctgtgcccc ggcaaaagga aaggaaacat catacccctt tcagaggcgg 5940  
 gggaaaacca aaggccagag agaatacagag atttatttcc ctaggggtcac acaggagatt 6000  
 cttcagcatc ctaaaaaagg agatgacggc acagcaggtc atatttgga gttcttatct 6060  
 gggggaaggg ggatcttaaa cctcccattg tggacacctg gcatcgatca acccatctt 6120  
 ttggatcatc tttgggtcac tcaaggaaac tgaggtcaag gaggtcaag aggtccctc 6180  
 ttaaagtctc tcagggccat atattccacc cttcctccct gggagagccg cagctggagg 6240  
 tcggtactgg ggcgaggctg cactgagagt gggcttcacc tccaccctc ccgcctctcc 6300  
 tcctcaggaa agcggaactg tttcggagaa ggctggcca gaatggagct ctttctcttc 6360  
 ttcaccaccg tcatgcagaa cttccgcctc aagtcctccc agtcaccta ggacattgac 6420  
 gtgtcccca aacacgtggg ctttgccacg atcccacgaa actacacat gagcttctg 6480  
 cccgctgag cgagggctgt gccggtgaag gtctggtggg cggggccagg gaaagggcag 6540  
 ggccaagacc gggcttggga gaggggcgca gctaagactg ggggcaggat ggcggaaagg 6600

aaggggcgtg gtggctagag ggaagagaag aaacagaagc ggctcagttc accttgataa	6660
ggtgcttccg agctgggatg agaggaagga aacccttaca ttatgctatg aagagtagta	6720
ataatagcag ctcttatttc ctgagcacgt acccccggtg cacctttggt caaaaaccat	6780
tgcacgctca cctaatttgc cacaaaaccc ccttcgaagg ggcgttcatg cccattttac	6840
acgtgacaaa actgaggcctt agaaagttgt ctctgatgtc tcacaaaaca taagtgccca	6900
gaaaatctgc gaacacagat ctgtgcccac agccttctag acagattctt aaaaagcacc	6960
tattcctcac gcaaaacagt ttagtataga atcacatggc ctgaacatcc ctgtccgggg	7020
gagttcccca gagacctggg ggggtggttc cctgccttca ctgcacacat gccacactc	7080
tcacctactc aacatgctgt gactaccggg gtgtaatctg tgcttgctac cagataaggc	7140
cactgtagcc cattcagagt cagcccaggg acacaacgag acatgactgg acatacaggg	7200
tcagtcatt aacaa	7215

<210> 2  
 <211> 1415  
 <212> DNA  
 <213> Homo sapiens

Q14

<400> 2	
gaattccgcc ctgcacccat gaccgcctcc caccagggcc ccgccctctg ccccttttgg	60
gaaaccttct gcagatggat agaagaggcc tactcaaate ctttctgagg ttccgagaga	120
aatatgggga cgtcttcacg gtacacctgg gaccagggcc cgtgggtcatg ctgtgtggag	180
tagaggccat acgggaggcc cttgtggaca aggctgaggc cttctctggc cggggaaaaa	240
tcgccatggt cgaccattc ttccggggat atgggtgtgat ctttgccaat ggaaaccgct	300
ggaaggtgct tcggcgattc tctgtgacca ctatgaggga cttcgggatg ggaaagcgga	360
gtgtggagga gcggattcag gaggaggctc agtgtctgat agaggagctt cggaaatcca	420
agggggccct catggacccc accttctctt tccagtcctat taccgccaac atcatctgct	480
ccatcgtctt tggaaaacga ttccactacc aagatcaaga gttcctgaag atgctgaact	540
tgttctacca gactttttca ctcatcagct ctgtattcgg ccagctgttt gagctcttct	600
ctggcttctt gaaatacttt cctggggcac acaggcaagt ttacaaaaac ctgcaggaaa	660
tcaatgctta cattggccac agtgtggaga agcaccgtga aaccctggac cccagcgccc	720
ccaaggacct catcgacacc tacctgctcc acatggaaaa agagaaatcc aacgcacaca	780
gtgaattcag ccaccagaac ctcaacctca acacgctctc gctcttcttt gctggcactg	840
agaccaccag caccactctc cgctacgggt tctgtctcat gctcaaatac cctcatgttg	900
cagagagagt ctacagggag attgaacagg tgattggccc acatcgccct ccagagcttc	960

atgaccgagc caaaatgcca tacacagagg cagtcaccta tgagattcag agattttccg 1020  
accttctccc catgggtgtg cccacattg tcaccaaca caccagcttc cgagggtaca 1080  
tcatcccaa ggacacagaa gtattttctca tcctgagcac tgctctccat gaccacact 1140  
actttgaaaa accagacgcc ttcaatcctg accactttct ggatgccaat ggggcactga 1200  
aaaagactga agcttttata cctttctcct tagggaagcg gatttgtctt ggtgaaggca 1260  
tcgcccagc ggaattgttc ctcttcttca ccaccatcct ccagaacttc tccatggcca 1320  
gccccgtggc ccagaagac atcgatctga cccccagga gtgtggtgtg ggcaaaatac 1380  
cccaacata ccagatccgc ttctgcccc gctga 1415

<210> 3  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligodeoxynucleotide ASO#15

<400> 3  
tagagggatg atagatggtg ac 22

<210> 4  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligodeoxynucleotide ASO#13

<400> 4  
cttcattgagg gagttgtac 19

<210> 5  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligodeoxynucleotide ASO#25

<400> 5  
ggccatagcg ctactgat 19

<210> 6  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligodeoxynucleotide ASO#23

<400> 6  
ccatagcctt tgaagaccca g 21

<210> 7  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antisense Oligodeoxynucleotide MSO#23

<400> 7  
ccccagcctt tgaagacata g 21

<210> 8  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> F4 Primer

Q14  
<400> 8  
cctcccttgc tggctgtgtc ccaagcttag gc 32

<210> 9  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> R4 Primer

<400> 9  
cgcccttcc tttccgcat cctgccccca g 31

<210> 10  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> E3F Primer

<400> 10  
gcgtggtatt cagcaacggg 20

<210> 11  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> E3R Primer

<400> 11  
tcgtgggtgt tttccttc

18

all  
concl